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ABSTRACT

The relationships among teaching techniques, definitions of curriculum, and time perceptions of male faculty members at a comprehensive state-supported university in the South were examined. The respondents were categorized into the three main academic areas of natural sciences, social sciences, and humanities. Curriculum definitions ranged from structured, mid-range, and nonstructured designations. Teaching techniques (formal vs. informal) were found to be significantly related to both time perceptions and definitions of curricula. Those faculty members who defined curriculum in structured terms also employed formal teaching techniques, and generally, these were professors in the natural sciences. Time perceptions (analytical, ambiguous, or synoptic) were also related to teaching technique. Those respondents whose view of time was analytical (mainly those from the natural sciences) utilized formal teaching techniques in their undergraduate classes. Those whose perception of time was classified as ambiguous (mainly respondents from the social sciences) tended to employ informal teaching techniques. However, time perceptions and definitions of curriculum were not related. It is suggested that such profiles of respondents can influence administrative decision-making and planning and the evaluation of teaching effectiveness. Administrators might use profile data to justify differentiated organizational patterns and flexible course assignment schedules. (SW)

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ACADEMIC PROFILES AND DECISION-MAKING IMPLICATIONS

by

Dianne S. Peters and Landa Trentham

Of the many variables distinguishing among the professoriate, one of the most significant is that of academic discipline. From Brown's (1967) study on mobility patterns to more recent studies (e.g., Biglan, 1973 (a) and (b); Smart and Elton, 1975; Stark and Morstain, 1978) the literature amply demonstrates that the academic disciplines to which professors belong are critical for understanding faculty behavior, for attempting to evaluate teaching effectiveness, and for planning the institution's future. Although categorizing the disciplines into workable schema is somewhat controversial in the sense that several taxonomies have been delineated (Snow, 1964; Bell, 1966; Holland, 1973; Wilkes, 1976), it is nonetheless well established that academic discipline or academic area nearly always relates to such variables as faculty teaching techniques (Peters, 1974 (b)), interactions with students (e.g., Gamson, 1967), productivity (Blackburn, 1972), scholarship (e.g., Pelz and Andrews, 1966), teaching goals (Vreeland and Bidwell, 1966; Platt, Parsons, and Kirshstein, 1976), and perceptions of time (Peters, 1979).

Focusing on the relationships among faculty teaching techniques, definitions of curriculum, and time perceptions adds to an understanding of faculty behavior especially as it occurs in the teaching-learning

situation at the undergraduate level. Assuming that academic area is a significant variable, the following hypotheses are offered:

Hypothesis 1. The teaching techniques of male university faculty members will relate to their definitions of curriculum.

Hypothesis 2. The teaching techniques of male university faculty members will relate to their perceptions of time.

Hypothesis 3. The time perceptions of male university faculty members will relate to their definitions of curriculum.

Sample and Methodology

Owing to the small sample size (N=100) of male members (i.e., sex is not a variable in this study) representing the three professorial ranks and a broad spectrum of academic disciplines at a comprehensive, state-supported university, the respondents are classified by a taxonomy delineating three academic areas (Parsons and Platt, 1968): the Natural Sciences (N=32), the Social Sciences (N=45), and the Humanities (N=23). The Natural Sciences are represented by such academic disciplines as chemistry, mathematics, engineering, agronomy, and animal sciences; the Social Sciences, by psychology, education, and management; and the Humanities, by English, history, and speech-theatre.

Previous analyses of the interviews conducted with these respondents (Peters, 1974 (a) and (b), 1979) have defined the terms used in this study. Teaching techniques, for example, are defined as formal (e.g., lecture, lecture-discussion, films, slides, and overhead projector presentations) or informal (e.g., small groups, individualized instruction). The respondents' definitions of curriculum are positioned

on a continuum from structured to non-structured. At the structured pole are those definitions which not only characterize curriculum as a series or sequence of courses leading to a "degree/major" in the field, but also distinguish among curriculum, co-curriculum, and extra-curriculum. At the non-structured pole are definitions which do not distinguish curriculum from "co-" or "extra-" but which regard what one might call "college days" (football games, fraternity parties, browsing in a bookstore, and even "carousing") as an integral component of curriculum. Between these two poles is a mid-range category which defines the term as that which falls under the university's academic purview, and thus attendance at a speakers' series or students' studying together at the library comes under this definition.

Classifying the time perceptions of the respondents is a matter of some importance since these perceptions did not conform to Jungian categories previously established by psychological research (e.g., Evans, 1976). Faculty perceptions of time are distributed in three general categories (see Peters, 1979). The first is labeled "Ambiguous;" time has more than one meaning for one group of respondents. Another group perceives time in "Analytical" terms; for these people time is linear, a dimension for measuring. The third category is "Synoptic," an arbitrary label which distinguishes one group of respondents whose time perceptions are neither Analytical or Ambiguous.

Given these definitions in teaching techniques, curriculum, and time perceptions, the resulting matrices are suitable for statistical analyses using the Chi-Square technique.

Analysis and Findings

Before presenting the analysis of relationships among faculty teaching techniques, definitions of curriculum, and time perceptions, it is necessary to demonstrate that academic area is significantly related to definitions of curriculum (i.e., Peters, 1974 (a), fails to provide proper statistical evidence that these two variables are significantly related). Table 1 provides these data.

Table 1: Relationships Between Curriculum Definitions and Academic Area

	Definitions of Curriculum			
Academic Area	Structured	Mid-Range	Non-Structured	
Natural Sciences	25 25%	4 4%	3 3%	32 32%
Social Sciences	11 11%	19 19%	15 15%	45 45%
Humanities	11 11%	4 4%	8 8%	23 23%
	47 47%	27 27%	26 26%	100 100%

$x^2 = 23.625348$, df=4
$p = .01$

In Table 1, as in succeeding tables, the upper set of figures in each cell indicates the frequency count, the lower set, the percentage of the entire sample. Significant in Table 1 are (1) twenty-five of the respondents in the Natural Sciences define curriculum in structured terms, and (2) nineteen respondents in the Social Sciences define

curriculum at the mid-range position. It is interesting to note that the data in Table 1 indicate the relatively uniform definition of curriculum used by those in the Natural Sciences, the polarized definitions of the Humanities professors, and the broad diversity of definition among the Social Scientists. These findings are congruent with those of Vreeland and Bidwell (1966). A chi-square analysis of the respondents' definitions of curriculum by professorial rank did not produce significance (x^2 = 2.9670902, df=4) and so are not tabularized.

Table 2 presents those data which demonstrate that teaching techniques are related to definitions of curriculum at a significance beyond the .01 level of confidence.

Table 2: Relationships Between Curriculum Definitions and Teaching Techniques

Definitions of Curriculum	Teaching Techniques		
	Formal	Informal	
Structured	37 37%	10 10%	47 47%
Mid-Range	14 14%	13 13%	27 27%
Non-Structured	11 11%	15 15%	26 26%
	62 62%	38 38%	100 100%

x^2 = 11.038901, df=2
p = .01

Significant in Table 2 is that those faculty who define curriculum in structured terms also employ formal teaching techniques, and, generally, these are professors in the Natural Sciences.

Table 3 presents data demonstrating the relationship between teaching technique and time perceptions. This relationship is significant beyond the .01 level of confidence.

Table 3: Relationships Between Time Perceptions and Teaching Techniques

	Teaching Technique		
Time Perceptions	Formal	Informal	
Analytical	32 32%	8 8%	40 40%
Ambiguous	14 14%	26 26%	40 40%
Synoptic	11 11%	9 9%	20 20%
	57 57%	43 43%	100 100%

$x^2 = 16.564668$, df=2
$p = < .01$

Significant in Table 3 is that those respondents whose view of time is Analytical (and these are primarily respondents in the Natural Sciences) utilize formal teaching techniques in their undergraduate classes. It is also important that those whose perception of time is classified as Ambiguous (and these are primarily respondents in the Social Sciences) also tend to employ informal teaching techniques.

Table 4 presents data relating the respondents' definitions of curriculum to their time perceptions.

Table 4: Relationships Between Curriculum Definitions and Time Perceptions

	Curriculum Definitions			
Time Perceptions	Structured	Mid-Range	Non-Structured	
Ambiguous	14 14%	14 14%	12 12%	40 40%
Analytical	26 26%	7 7%	7 7%	40 40%
Synoptic	7 7%	6 6%	7 7%	20 20%
	47 47%	27 27%	26 26%	100 100%

$x^2 = 7.7386032$, df=4
$p = < .10$, NS

Although the data in Table 4 are not significant, one might note that those whose perceptions of time are Analytical also define curriculum in structured terms. These are respondents primarily in the Natural Sciences, but these data only approach significance at the .10 level of confidence.

Hypothesis 1, that the teaching techniques of male university faculty members will relate to their definitions of curriculum, is confirmed.

Hypothesis 2, that the teaching techniques of male university faculty members will relate to their perceptions of time, is confirmed.

Hypothesis 3, that the time perceptions of male university faculty members will relate to their definitions of curriculum, is not confirmed.

Discussion

At least two major concerns of higher education are directly related to the findings in this study. The first of these is administrative decision-making and planning. These processes must be responsive to many external and internal pressures. External demands originate with society and its demand for a certain kind of educational "product" and with funding allocations which expect real accountability in the use of various resources. Internal demands may originate with faculty who expect both strong support and academic freedom and with students who seek a more powerful role in determining their own educational experience. Many of these demands conflict even though all concerned have the best of motives. Administrators who attempt to negotiate and operationalize goals which will allow their institutions to be most effective often find themselves caught in an "organizational dilemma" in which no one is fully satisfied and so all are disillusioned.

One inherent problem is that administrators who must communicate with external constituencies often have no quantifiable data to support reasonable educational decisions. Admittedly, education is a big business, but developing a "mental" product is quite different from developing a more concrete product that yields a profit, thus the difficulty in justifying a differentiated organizational pattern. Small sample size notwithstanding, data such as those in this study are one example of attempting to quantify certain human qualities that have an impact on teaching performance and, in turn, the institution.

Administrators need data not only to explain their organization's needs more clearly to "outside others," but also to make decisions and plans that will support or facilitate effective teaching. One major planning decision is the determination of facilities and equipment usage. Those faculty who have informal teaching styles need more flexible classroom arrangements, for instance furniture that can be rearranged as group patterns require. Faculty who have more formal teaching styles may operate more effectively in a structured classroom setting such as an auditorium arrangement. Thus, on a short-range planning basis, faculty characteristics may be a determining factor in room assignments for classes. On a more long-range basis, refurnishing or renovating existing structures or designing new structures on the campus could well be affected by faculty styles and characteristics.

Class size is also a planning factor that should at least be partially determined by faculty styles and course objectives. (Course objectives themselves are most frequently determined by faculty and so reflect faculty styles and perceptions of curriculum.) Those faculty who use more formal teaching techniques and/or who view curriculum in a structured way are often comfortable with larger classes. Conversely, faculty who are informal in style and/or view curriculum as non-structured usually find their "conversational, life experience" teaching orientation more satisfactory in a small class.

Another planning factor influenced by data such as these is flexibility in scheduling. Not all professors want or need music, buzzers, or bells counting time at regular intervals. Some prefer and need fewer such reminders so that, for example, they might "self-pace"

or individualize one segment of a course. Faculty who have informal teaching styles and/or ambiguous perceptions of time might well benefit from a flexible schedule that could be readjusted periodically to meet teaching needs. The more structured schedule may well be more appropriate for those faculty who have more structured styles and/or more analytical perceptions of time.

Obviously, data collection/analyses of human qualities that affect faculty performance require specificity in both definition and measurement before they can be effectively used for academic planning or for communicating institutional needs. Future research might well pursue these definitions and measures. As well, future research might determine the various interrelationships of job-related human qualities. This study does provide some basic information and processes that can assist such endeavors.

The second major area of concern directly related to the data in this study is that of teaching effectiveness. The use of the term "effective" whether in reference to administrative planning or teaching performance implies that evaluation will occur. Where they are used, evaluation procedures have often assumed a "lock-step" approach using student and/or peer opinion, student cognitive growth, or some combination of the two to judge faculty performance in the classroom. All too often, the lack of suitable, specific criteria and/or preconceived notions of "good teaching" have led to inequitable evaluations of faculty performance. All too few of these procedures have concerned themselves with differing faculty styles, characteristics, or needs. Even fewer of the procedures have attended to the organizational climate as it supports or fails to support teacher performance.

A basic premise of this research study is that faculty too are individual human beings and should be evaluated as such, albeit they cluster in "subcultures" like academic disciplines or areas. This premise leads to three conclusions relative to evaluating faculty performance:

1. The observer/rater(s) and the faculty member being assessed must have a clear understanding of that professor's teaching style and related characteristics.

2. Faculty evaluation procedures must emphasize equitability more than equality.

3. The teaching environment as a factor having impact on teaching performance must be made as appropriate as possible for each faculty member.

An appropriate faculty/administrator development program is needed in order to operationalize an evaluation procedure that will meet the criteria noted. At the least, the development program should provide for such activities as assessing faculty characteristics, styles, and needs; planning and implementing appropriate teaching situations; developing suitable criteria for equitable evaluation; training those who will observe/rate to use evaluation criteria as objectively as possible; and so forth.

It is quite obvious that this discussion presents no new concepts. This study does, however, seek to stress the fact that more and better data relative to faculty characteristics are essential if planning and assessing processes are to be equitable and effective.

Establishing institutional goals, planning for faculty growth and development, and assessing teaching effectiveness are all parts of a cooperative cycle in which every dimension of quality depends on human concerns. Of necessity, we must ascertain that faculty are meeting their responsibility to the institution in terms of teaching performance. Before we can make that determination adequately, however, we must ask, "Did the institution indeed fulfill its responsibility to individual faculty?"

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